

AMENDED CLAIMS

1. Ballistic-resistant moulded article containing a compressed stack of monolayers, with each monolayer containing unidirectionally oriented reinforcing fibres and at most 30 wt.% of a plastic matrix material and with the fibre direction in each monolayer being rotated with respect to the fibre direction in an adjacent monolayer, characterized in that the density (ρ_p) of the compressed stack is at least 98.0% of the theoretical maximum density.
2. Ballistic-resistant moulded article according to claim 1, characterized in that the density ρ_p is at least 99.0% of the theoretical maximum density.
3. Ballistic-resistant moulded article according to claim 1 or claim 2, characterized in that the reinforcing fibres in the monolayer have a tensile strength of at least 1.2 GPa and a tensile modulus of at least 40 GPa.
4. Ballistic-resistant moulded article according to any one of the claims 1-3, characterized in that the reinforcing fibres in the monolayer are high-drawn fibres of high-molecular-weight linear polyethylene.
5. Ballistic-resistant moulded article according to claim 1, characterized in that the plastic matrix material is an elastomer with a tensile modulus (at 25°C) of at most 41 MPa.
6. Ballistic-resistant moulded article according to claim 1, characterized in that the rotation amounts to 90 degrees.
7. Ballistic-resistant moulded article according to claims 1-6, characterized in that the moulded article has a specific energy absorption (SEA) of at least 75 Jm²/kg on impact of a 7.62 x 39 Mild Steel Core P.S. Ball M1943 bullet.
8. Process for manufacturing a ballistic resistant moulded article in which a stack is made of crosswise-arranged monolayers, which stack is compressed under pressure of at least 5 MPa and at an elevated temperature and which

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stack is thereafter cooled under pressure, characterized in that the monolayers have a fiber weight between 25 and 100 gr/m².

9. ~~Process for manufacturing a ballistic-resistant moulded article in which in a first step a semi-manufactured article is produced by forming a stack of cross-layered monolayers, which stack has an areal density of from 0.25 to 5 kg/m², and subsequently compressing this stack at an elevated temperature and cooling this stack at a given first compressive pressure whereupon, in a second step, the semi-manufactured articles are compressed onto each other at an elevated temperature and cooled at a given second pressure, with the first pressure being at least 5 MPa.~~

10. ~~Process according to claim 9, characterized in that the second pressure is at most 5 MPa.~~

11. ~~Process according to claim 8 or 9, characterized in that the stack is made from consolidated monolayer packages containing from 2 to 8 monolayers that are placed cross-wise.~~

12. ~~Process according to claim 11, characterized in that the monolayer packages, too, are compressed and cooled at a pressure of at least 5 MPa.~~

13. ~~Process according to any one of the claims 8, 9 or 12, characterized in that the specified pressure is at least 7 MPa.~~

14. ~~Process according to any one of the claims 8, 9 or 12, characterized in that the specified pressure is at least 10 MPa.~~

15. ~~Process according to any one of the claims 8-14, characterized in that the reinforcing fibres in the monolayers have a cross-section aspect ratio of at most 3.~~

16. ~~Process according to any one of the claims 8-15, characterized in that the monolayer has been obtained by im~~

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pregnating the reinforcing fibres with an aqueous dispersion containing the plastic matrix material.

17. Process according to any one of the claims 8-16, characterized in that the monolayer has a fibre weight of between 50 and 150 g/m².

18. Ballistic-resistant moulded article obtainable according to the process of any of the claims 8-17, characterized in that the moulded article has a SEA of at least 75 Jm²/kg on impact of a 7.62 Mild Steel Core P.S. Ball M1943 bullet.

19. Semi-manufactured article according to the first step in the process according to claim 9 for the manufacture of a ballistic-resistant moulded article according to any of the claims 9-16, characterized in that the areal density of the semi-manufactured article is between 0.25 and 5 kg/m².